

REMARKS

Claims 1-10 are now present in this application.

Claims 1-5 have been amended, and claims 6-10 have been added. Reconsideration of the application, as amended, is respectfully requested.

Claims 1 and 4

Claims 1 and 4 stand rejected under 35 USC 102(e) as being anticipated by Zou et al., U.S. Patent 6,550,942. This rejection is respectfully traversed.

Claims 1 and 4 are amended to more clearly describe the features of the scanning device. As the Examiner will note, independent claims 1 and 4 have been amended to recite how the transparency of the present invention facilitates the light beam, emitted from the lamp, to dispread substantially equally onto the object to be scanned. The present invention discloses a scanning device for scanning an object that has two ends. The scanning device comprises a lamp and a transparency. The lamp, which has two ends, is used for emitting a light beam onto the object. The transparency is disposed between the lamp and the object. The light beam emitted from the lamp passes through the transparency first and then onto said object. In addition, the light beam is substantially collimated before passing through the transparency, and after the light beam passes through the transparency, the transparency refracts said light beam to deflect toward the two ends of the object, to facilitate said light beam to dispread substantially equally onto said object. One feature of the present invention is that the light beam direction changed by the transparency is toward the two ends of the object, and the spatial relationship of the lamp and the

object is described as “[a] first line defined by the two ends of the lamp is substantially parallel to a second line defined by the two ends of the object.”

Referring to claim 1 of Zou, the subject matter of Zou is a linear illumination source comprising a linear light source, an external reflective enclosure, and at least one optical element. In contrast, the subject matter of the present invention is a scanning device, which has an ingenious arrangement inside to increase the light intensity at two ends of the object (paragraph 0021). Zou does not disclose any technique to allow the light intensity at both ends of an object to be scanned to become sufficient due to the physical constraints of the lamp (paragraph 005, last line) in a scanning device. Besides, a linear light source is defined as a light source having a length dimension that is at least three times the width dimension (column 3, paragraph 2). Zou teaches how to concentrate the light from the light source to provide a linear light, but does not disclose any idea of dispersing the light from the light source, which is the optical principle utilized by the present invention. Therefore, the subject matter claimed in each of claims 1 and 4 has novelty in comparison with Zou.

Accordingly, withdrawal of this 35 USC 102(e) rejection is respectfully requested.

Claim 2

Claim 2 stands rejected under 35 USC 102(e) as being anticipated by Niimi et al., International Publication WO 03/032363. This rejection is respectfully traversed.

Claim 2 is amended to more clearly describe the features of the scanning device. As the Examiner will note, independent claim 2 is amended to more clearly describe the features of the scanning device. As the Examiner will note, independent claim 2 has been amended to recite

how the tube of the present invention facilitates the light beam, emitted from the lamp, to dispread substantially equally onto the object to be scanned. Similar to claim 1 and 4 mentioned above, one feature of the present invention is that the light beam direction changed by the transparency is toward the two ends of the object, and the spatial relationship of the lamp and the object is described as “[a] first line defined by the two ends of the lamp is substantially parallel to a second line defined by the two ends of the object.”

Referring to the title and abstract of Niimi, the subject matters of Niimi are a high-voltage discharge lamp for automobile and an arc tube for the high-voltage discharge lamp. The subject matter of the present invention is a scanning device, which has an ingenious arrangement inside to increase the light intensity at two ends of the object (paragraph 0021). Niimi does not disclose any technique to allow the light intensity at both ends of an object to be sanned to become sufficient due to the physical constraints of the lamp (paragraph 0005, last line) in a scanning device. Moreover, Niimi’s high-voltage discharge lamp only involves how to concentrate the light from the light source by different thickness along the tube (see the brightness center 9 located at the thin portion 2c), but does not disclose any idea of dispersing the light from the light source, which is the optical principle utilized by the present invention. Thus, claim 2 of the present invention, considered as a whole, has novelty in comparison with Niimi.

Accordingly, withdrawal of this 35 USC 102(e) rejection is respectfully requested.

Claim 3

Claim 3 stands rejected under 35 USC 102(b) as being anticipated by Nelson et al., U.S. Patent 3,885,181. This rejection is respectfully traversed.

Claim 3 is amended to more clearly describe the features of the scanning device. As the Examiner will note, independent claim 3 has been amended to recite how the tube of the present invention facilitates the light beam, emitted from the lamp, to disspread substantially equally onto the object to be scanned. Similar to claims 1 and 4 mentioned above, one feature of the present invention is that the light beam direction changed by the transparency is toward the two ends of the object, and the spatial relationship of the lamp and the object is described as “[a] first line defined by the two ends of the lamp is substantially parallel to a second line defined by the two ends of the object.”

Referring to claim 1 of Nelson, the subject matter of Nelson is a high-pressure electric discharge lamp with a non-uniform conformation tubular envelope wall. The subject matter of the present invention is a scanning device, which has an ingenious arrangement inside to increase the light intensity at two ends of the object (paragraph 0021). Nelson does not disclose any technique to allow the light intensity at both ends of an object to be scanned to become sufficient due to the physical constraints of the lamp (paragraph 0005, last line) in a scanning device. Nelson’s high-pressure electric discharge lamp only involves how to concentrate the light from the light source, but does not disclose any idea of dispersing the light from the light source, which is the optical principle utilized by the present invention. Thus, claim 3 of the present invention has novelty in comparison with Nelson.

Accordingly, withdrawal of this 35 USC 102(b) rejection is respectfully requested.

Claim 5

Claim 5 stands rejected under 35 USC 102(e) as being anticipated by Lewin, U.S. Patent 4,575,788. This rejection is respectfully traversed.

Claim 5 is amended to more clearly describe the features of the scanning device. As the Examiner will note, independent claim 5 has been amended to recite how the reflector of the present invention works to facilitate the light beam, emitted from the lamp, to disspread substantially equally onto the object to be scanned. Similar to claims 1 and 4 mentioned above, one feature of the present invention is that the light beam direction changed by the transparency is toward the two ends of the object, and the spatial relationship of the lamp and the object is described as “[a] first line defined by the two ends of the lamp is substantially parallel to a second line defined by the two ends of the object.”

The subject matter of Lewin is a luminaire having a housing and four reflector sections for use with HID lightbulbs (referring to claim 1 and the abstract of Lewin). The subject matter of the present invention is a scanning device which has an ingenious arrangement inside to increase the light intensity at two ends of the object (paragraph 0021). Lewin does not disclose any technique to allow the light intensity at both ends of an object to be scanned to become sufficient due to the physical constraints of the lamp (paragraph 0005, last line) in a scanning device. Lewin’s luminaire involves how to produce uniform light patterns from HID light source (column 2, lines 48-50), but does not disclose any idea of dispersing the light from the light source, which is the optical principle utilized by the present invention. Therefore, claim 5 of the present invention has novelty in comparison with Lewin.

Accordingly, withdrawal of this 35 USC 102(b) rejection is respectfully requested.

Conclusion

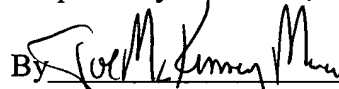
In view of the foregoing amendments and remarks, all claims in the instant application should now be in condition for allowance. Accordingly, withdrawal of all rejections and an early Notice of Allowance are earnestly solicited.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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